Pro Stepper

Service Manual

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Display Panel

Pro Stepper Series 5100 display keypad

Preventive Maintenance

To keep your Star Trac Pro Stepper in top condition, Star Trac strongly recommends performing regular daily, weekly and monthly preventive maintenance routines outlined below.

Daily Maintenance

Remove excessive accumulations of dust, dirt and other substances by using a clean, soft cloth and a non-abrasive liquid cleaner, such as Formula 409™ or FANTASTIK™. Wipe down the exterior of the display panel, pedals, shrouds and heart rate grips.

Note: Do not spray directly on the display or heart rate grips.

Spray on the cloth first then wipe the display.

Weekly Maintenance

Perform the following services each week:

- Vacuum the floor under and around the Pro Stepper. Move the unit to another spot, if necessary, to vacuum thoroughly.
- Inspect the screws (i.e. display panel mounting screws) for security, and retighten if necessary.
- Inspect the display panel keypads for wear.

Monthly Maintenance

Perform all the steps in weekly maintenance plus the following services each month, or as needed:

- Check that the pedals and shrouds are secure.
- Check for smooth and quiet operation of all moving parts.

Preventive Maintenance – Cont'd

Quarterly Maintenance

Perform all the steps in weekly and monthly maintenance plus the following services each month, or as needed:

Remove the return springs form the chains:

- Raise and lower the pedal arms and inspect for smoothness. Binding or excessive looseness might indicate a worn bushing.
- Rotate the clutch sprocket and inspect for smoothness. As you rotate the clutch towards the pedals it will turn the drive belt but as you turn the clutch towards the drive belt it will spin freely and will not turn the drive belt.
- Inspect the chain pulleys by spinning them.
    a. If they spin freely they are ok
    b. If they bind check for areas that bind and adjust or replace as needed.
- Inspect the chains and springs for wear.
    a. Frozen links will require a chain replacement.
- Lubricate the chain with white lithium grease.
- Rotate the clutch sprockets 180 degrees from the original position and reassemble the springs and chain back onto the sprockets.

Settings - Maintenance Mode

The Maintenance Mode allows you to query and modify the basic settings of the Star Trac Pro Stepper.

Engaging Maintenance Mode

Press and hold the 0, 2 and OK keys together.
A beep will sound and the “MAINTENANCE MODE” will display momentarily in the information window.
Release all keys. “SERIAL NO XXXXX” will display in the information window.

Modifying the Maintenance Mode

The following keys are used to modify Maintenance Settings:

Upper and Lower Data Information Window SCROLL keys: Display the next

and previous settings.

Increase and Decrease Level Keys: Adjust the value of the displayed setting up and down respectively, in increments of 1 unit.

OK Key: Updates (saves) the value of the display setting in the Flash memory, and exits Maintenance Mode.

Maintenance Mode Settings
The items that you may display and change:
Default values set in ()

Serial Number	Pro Stepper serial number (0)
Date	Manufactures date for the Pro Stepper (01/05)
Display Vers 1	Display software version (N/A)
Display Vers 2	Display software version (N/A)
LCB Vers	LCB software version (N/A)
Units	English = units of pounds, miles, feet inches; (English) Metric = units of kilograms, kilometers, centimeters
Time	Maximum time in minutes allowed for program, excluding warm-up and cool-down (20)
Weight	Default (to user), typical weight in lb (UNITS=English) or kg (UNITS = Metric) (350 lbs, 159 KG)

Settings - Maintenance Mode (cont.)

Language	Language is English, Dutch, French, German, Spanish, Swedish, Italian or Katakana (English)
Model	PB-UB = Pro Bike Upright, PB-RB = Pro Bike Recumbent, Pro CT = Pro CrossTrainer, Elite CT = Elite CrossTrainer, Stepper = Pro Stepper
LCB Type	LCB hardware version Ver3
CSAFE	Turns on/off CSAFE functionality (Off)
Auto Status	Turns on/off the unsolicited status of the CSAFE feature (Off)
Wall Power	Turns the wall power setting on/off (Off)
IRDA	Turns on/off infrared port functionality (Off)
OPER Hours	Total operating hours (0)
Quick Start	Number of times the Quick Start program was run since last reset (0)
Manual	Number of times the Manual program was run since last reset (0)
Fat Burner	Number of times the Fat Burner program was run since the last reset (0)
IHR Pro	Number of times the Interval Heart Rate Control program was run since the last reset (0)
CHR Pro	Number of times the Constant Heart Rate Control program was run since last reset (0)
Fit Test	Number of times the Fitness Test program was run since last reset (0)
GLT Sculpt	Number of times the Glute Sculptor program was run since last reset (0)
Thigh TNR	Number of times the Thigh Toner program was run since last reset (0)
Famous Step	Number of times the Famous Step program was run since last reset (0)
Comm Lost	Number of times a Comm Lost condition has occurred. See Display Codes
Key Down	Number of times a Key Down condition has occurred. See Display Codes
LED Test	Access to integral LED test function
Keypad Test	Access to integral keypad test function
Heart Rate Test	Access to integral heart rate system test function
Measurements	Access to integral measurements function

Diagnostics - Display Codes

Display Codes

Star Trac Pro Steppers perform a self-test at the beginning of every workout. If a problem is detected, a message displays before or after the workout, depending on the nature of the problem.

Key Down – One or more keys on the display panel are stuck in the “on” position for at least 10 seconds. This can occur if a user presses keys before the system is turned on.

Comm Lost – Communication between the Load Control Board (LCB) and the display are lost. This can occur if the display cable is not connected securely at install.

Diagnostics - LED Test

LED Test

The LED Test can be used to verify that all LED (lights) are functioning on the display assembly.

To engage the LED Test

Enter the Maintenance Mode (see Settings – Maintenance Mode).

Press SCROLL until LED Test is displayed in the information window.

Press OK to enter the LED Test. All lights on the display should be on.

Check for any burned out lights.

To exit the LED Test, press OK.

If any of the LED's do not illuminate, they may not be functioning and the display electronics should be replaced.

Diagnostics - Keypad Test

Keypad Test

The Keypad Test can be used to verify that all keys are functioning on the display assembly.

To engage the Keypad Test

Enter the Maintenance Mode (see Settings – Maintenance Mode).

Press SCROLL until Keypad Test is displayed in the information window.

Press OK to enter the Keypad Test.

Press each key on the display. Each time you press a key, the information window will display which key has been pressed.

To exit the keypad test, press OK.

If any of the keys do not respond, they may not be functioning and the display keypad must be replaced.

Diagnostics - Heart Rate Test, Measurements

Heart Rate Test

Heart Rate can be checked using the Heart Rate Test.

To verify heart rate operation:

Enter the Maintenance Mode (see Settings – Maintenance Mode).

Press

until Heart Rate Test is displayed in the information window.

Press

to enter Heart Rate Test.

The display will read TELEMETRY.

If checking contact heart rate it will read “CONTACT” and the heart rate number.
If checking Polar, the display will read “TELEMETRY” and the heart rate number.

5. To exit the heart rate test, press

.

Measurements Mode

Measurements can be done to verify the voltage of the battery.
To verify the battery voltage:

Enter the Maintenance Mode (see Settings – Maintenance Mode).

Press

until Measurements is displayed in the information window.

Press

to enter Measurements.

The display will read “BATT VLT = “and the voltage of the battery.

To exit the measurements, press

.

Trouble Shooting - How do I use the Stepper?

Q. Why does the stepper not have any resistance when I increase the level?
A. When pressing the up▲ or down ▼ key you are actually changing the workout level of the user.
Press the increase (UP) ▲ level key the pedals will fall faster and there is less resistance so you have to work harder to keep up with it.
Press the down level (DOWN) ▼it makes the pedals move slower so it is easier to keep up with it.

Do not let the pedals touch the floor. Step fast enough to keep the pedals in their middle range, with step heights from 2 to 16 inches. If the pedals sink to the floor, step faster or decrease your work level by pressing the level down key▼.

Trouble Shooting - FAQ

Symptom	Possible Problem	Solution	Page #
Squeaking noise	Loose bearing	Check all bearings	14
Clicking Noise	Possible spacer missing	Examine clutch assembly	23
Popping noise	Frozen link on chain	Examine chain links	27
Pedals Slip	Possible clutch failure	Perform clutch and belt test	19
Loose Pedals	Bushing wear	Inspect bushings on pedal arms and pedals	16
No Power	Low battery	Check battery and connections	29
No resistance (Pedals fall) at level1 to 5	Possible low battery or RPM sensor out of alignment	Check battery voltage and rpm senor alignment	28
Too much resistance (Pedals won't move) at level 10 to 15	Possible model error or LCB failure	Check model in Maintenance mode. Swap LCB	12
Turns on but does not give speed	RPM sensor	Check RPM sensor LED on LCB (Load control board)	18
Start Pedaling	Wrong Model Selected	Change Model to Pro Stepper	12
Start Striding	Wrong Model Selected	Change Model to Pro Stepper	12
I forgot where the wires go on the alternator	Wires may be in the wrong position	Refer to the wiring photo	21
I'm replacing the LCB but am not sure where the connectors plug in.	The connectors are all different shapes so it is not possible to plug them in the wrong place	Refer to the LCB wiring diagram	20

Trouble Shooting - Incorrect Model Setting

The display electronics on the Pro Stepper can be configured to operate with many different models of Star Trac products. For them to operate properly, the correct model must be set in the Maintenance mode.

If the correct model is not set, the following may happen:

When the unit is powered up, the display will read “Pro Bike” (or Pro CrossTrainer or Elite CrossTrainer) in the level profile window.
The display will read “Start Pedaling” or “Start Striding” instead of “Start Stepping”.
Also, some programs will not work when the keys are pressed. i.e. When pressing the Hr Training Program Key, the Total Body program or Warm Up program will start.

If you experience any of these symptoms, engage the Maintenance mode to correct the Model setting.

Engaging Maintenance Mode

Press and hold the 0, 2 and OK keys together.
A beep will sound and the “MAINTENANCE MODE” will display momentarily in the information window.
Release all keys. “SERIAL NO XXXXX” will display in the information window.
Press the SCROLL until the display reads “Model”.
Press the + until the correct setting shows.
Stepper = Pro Stepper

Press OK to save the setting and exit the maintenance mode.
Test for functionality.

Trouble Shooting - Noise

Noise is one of the hardest things to diagnose because it may only make the noise under certain conditions. To find the part that is making the noise will require some patience and trial and error. It may also require the help of another person to slowly and safely move the part while another person listens.

NOTE: Always use safe work practices and do not allow clothing, hair or fingers to get caught in moving parts.

Try these methods when trying to locate the noise:

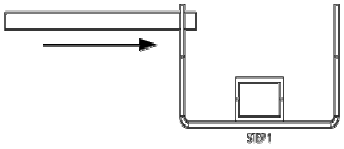
- Move the product to a quiet location to help in diagnosing the noise when possible.
- Loosen or tighten screws to make the noise louder or eliminate the noise. Often a noise will change its pitch when you do this and that may point you towards the correct part.
- Gently and carefully when possible spray a little lube on the bearing or shaft to see if the noise will get quieter. This is very successful when a shaft is spinning within a bearing and making a squealing noise.
- Remove part of the moving assembly to help isolate the noise.
- Try swapping parts, such as with the pedal springs, one spring may make a noise and not the other. Swap the springs to determine if the spring is at fault or the pulley, etc.
- Check for worn or damaged parts such as a worn spot on a plastic pulley.
- Look for metal shavings which might indicate a worn bearing or a set screw that is not tight.

The following pages discuss some areas that have moving parts and could be the source of noise.
Proper cleaning and lubrication as suggested in maintenance can prevent noises.

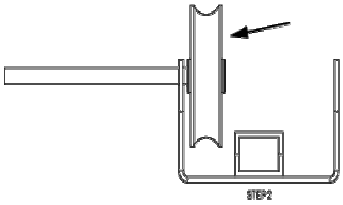
Return Spring Pulley Replacement– Pro Stepper

Parts replacement

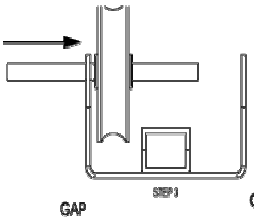
1. Insert the shaft a quarter into the frame.



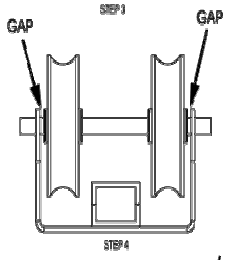
2. Slide one of the two pulleys onto the shaft.

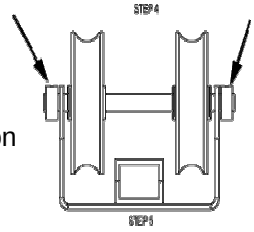


3. Slide the shaft halfway into the frame.
4. Slide the other pulley onto the shaft.



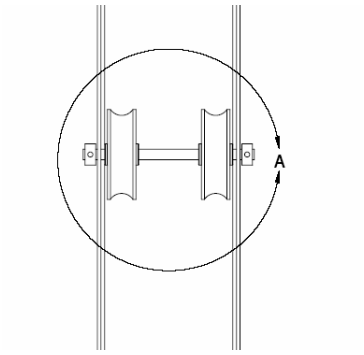
5. Slide the shaft into the other side of the frame.
6. Make sure there is a gap between the pulleys and the frame.
7. Slide the collar on the shaft ends outside the frame as shown by the arrows.
8. Align the shaft so it is even on both sides.
9. Tighten the set screws on the collars using the 1/8” Allen wrench.





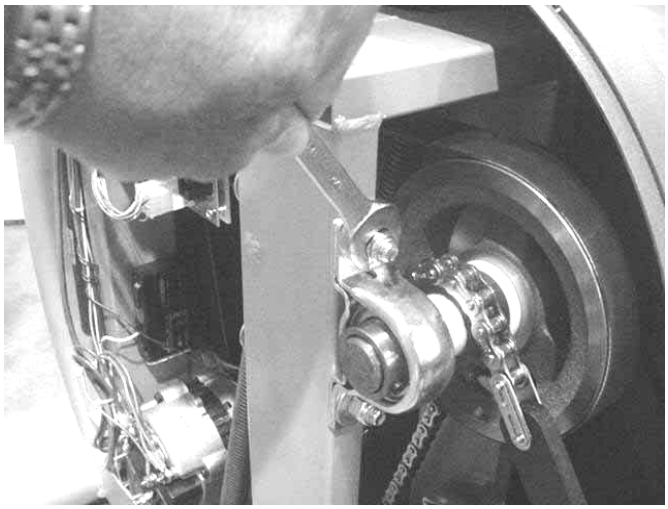
Adjustments and testing

10. Align the pulleys centered with the pedal arm.
11. Check to make sure the pulleys rotate freely and do not make noise ad you step on the pedals and use the stepper.
12. Examine the pulleys again and make sure they are not touching the frame.



Trouble Shooting – Noise- Clutch Pillow Blocks

The noise that you might hear as a result of the pillow block bearings being loose is a slight click or ticking sound.



- Use two 9/16 wrenches (or socket and wrench) to verify that all 4 bolts and nuts on the upper and lower pillow block assemblies are tight.
- Loosen the nuts and then ride it a little to let it settle, then tighten the nuts to determine if the noise is from the alignment of the shaft to the bearing.

- Loosen the set screws and rotate the shaft so the set screw is in the detent in the shaft. Tighten the set screw in the detent first then the other set screw and repeat the procedure on the other side.

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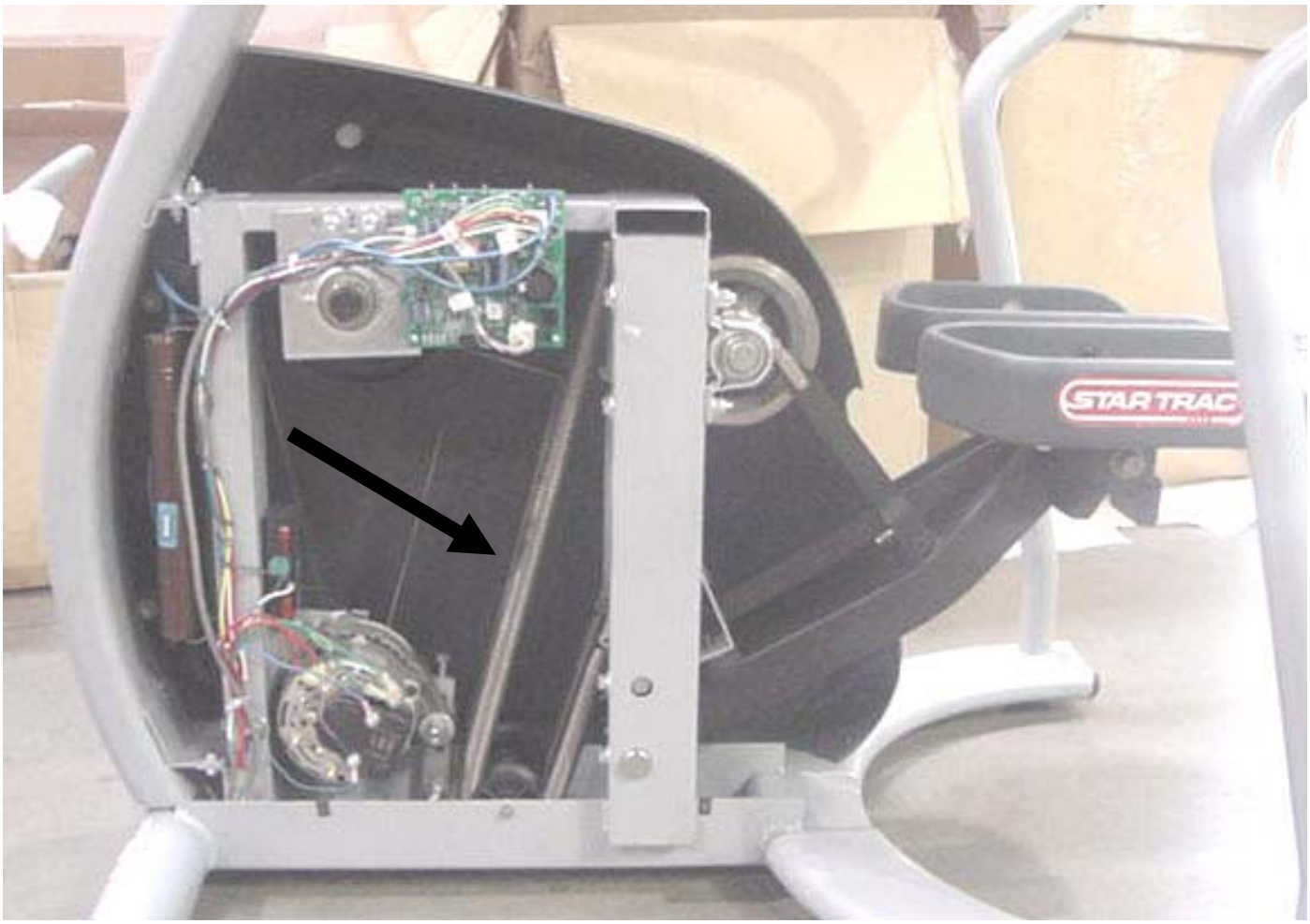
Trouble Shooting – Noise - Springs

Noise from the springs may make a pinging or a rubbing sound. Check the spring to make sure it is not twisted and the pulley is turning as the spring rolls over it.



Trouble Shooting – Noise - Pedals

- Check all hardware under the pedals for looseness.
- Check clips and springs to make sure they are aligned properly so they do not come off.

Parts Replacement – Shroud's

Parts Needed:
Shroud Left (711-3165-01)
Shroud Right (711-3165-02)
Tools Needed:
Phillips Head Screwdriver

Procedure:

Shroud removal

1. Remove the 4 screws on the inside front of the shroud and lift the shroud off the frame.

2. Remove the Shroud by unscrewing the 6 screws on each side of the shrouds.

3. Be careful not to pull on any of the cables as you remove the shroud.

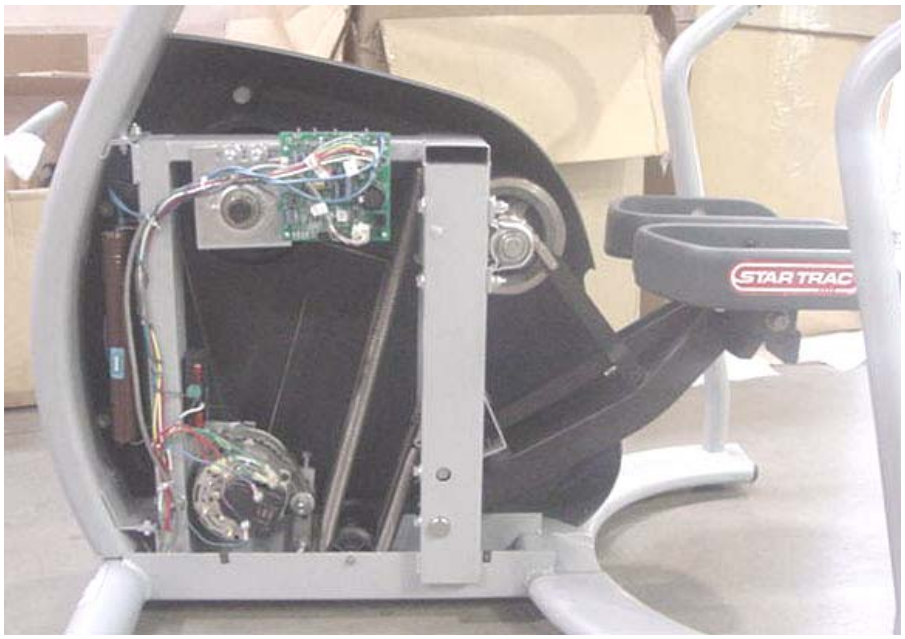
Shroud replacement

1. Place the side shrouds on first. Install the 6 screws per side.

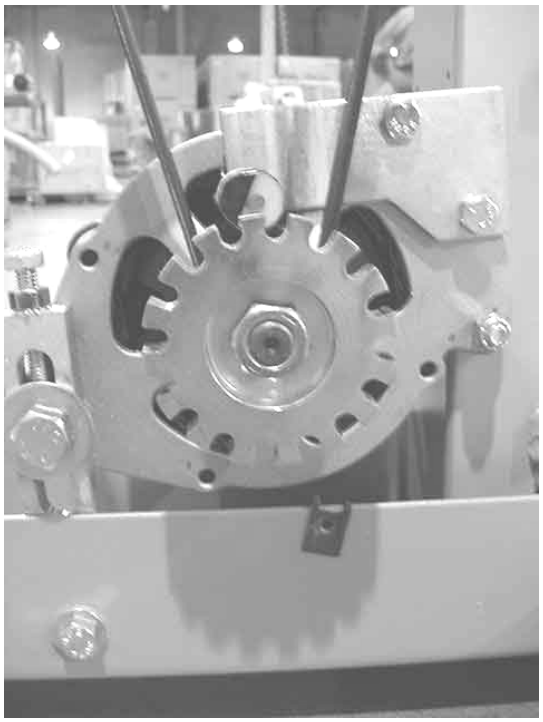
2. Install the front shroud and 4 small screws.

Part Installation Procedure - Shrouds

Open the left side for testing the alternator and the cables.

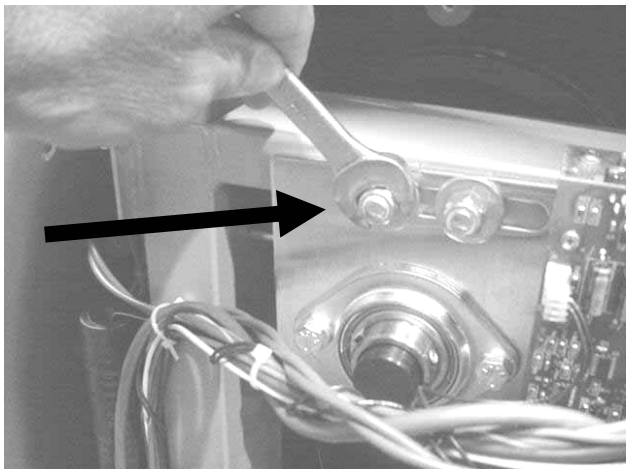


The RPM sensor and alternator adjustments are accessible from the right side.
The gap on the RPM sensor should be approx. 1 credit card.

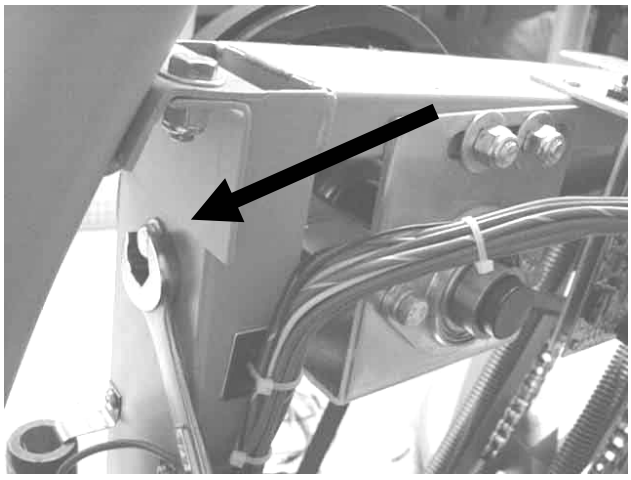


Part Adjsutment – Adjsuting Belt Tension

To adjust the tension of the main drive belt perform the following check.

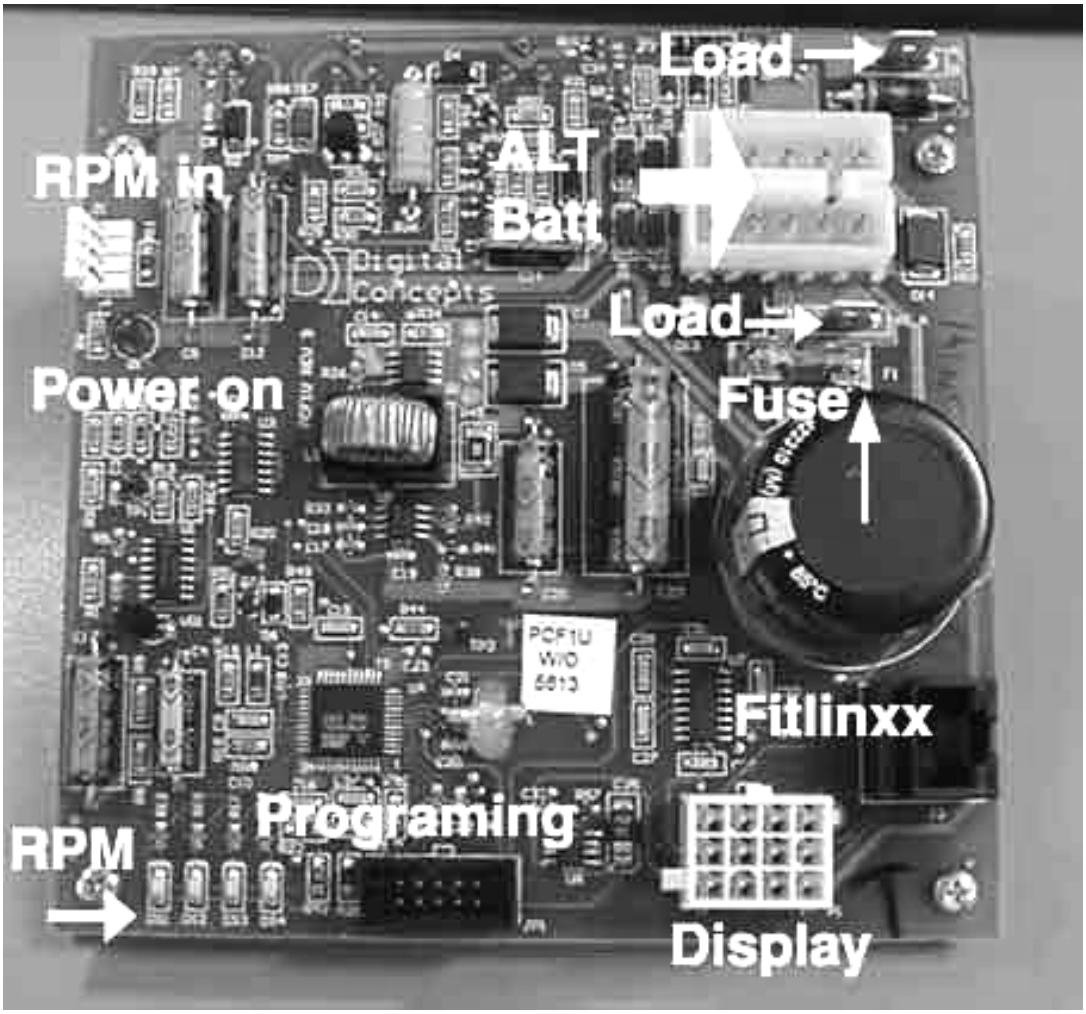


- **If the drive belt is slipping on the adjustable bracket assembly or the main pulley in-between the clutch sprockets, the belt will have to be tightened.**
- **Using a 9/16” inch open end wrench, loosen the large nuts holding the adjustable bracket on the frame of the stepper.**



- **Using a 7/16” open end wrench or socket wrench, turn the bolt in the front of the frame.**
- **To tighten the belt, turn the bolt clockwise this will pull the adjustable bracket forward. This will tighten the belt.**
- **To loosen the belt, turn the bolt counter clockwise. This will push the adjustable bracket closer to the pedals. This will loosen the belt.**

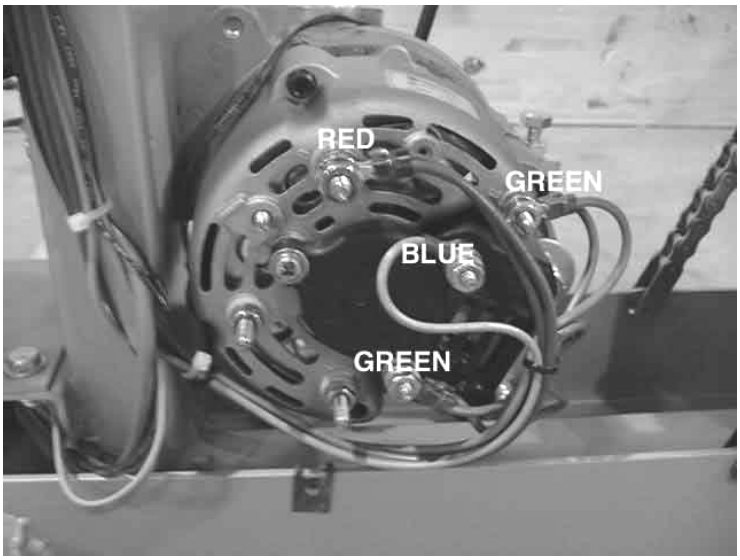
Part Installation Procedure - Load Control board Wiring



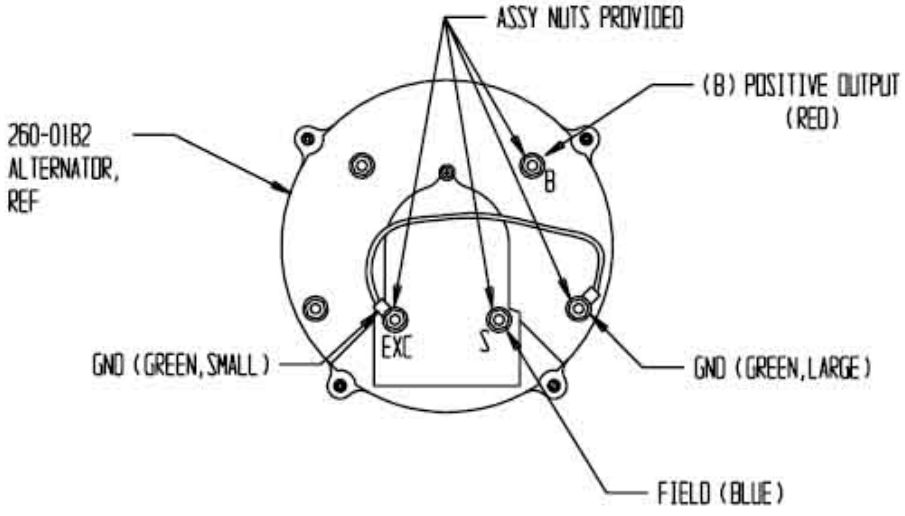
LCB Wiring

- **The LCB is protected from sweat and moisture by a clear plastic cover, remove this cover while accessing the LCB.**
- **All the connectors are keyed and will only fit properly in one direction.**
- **Make sure the connector is fully seated and locked.**
- **Run wires away from moving parts and tie wrap as needed.**
- **Not the RPM led, this will be lit when the rpm sensor is detecting the rotation of the alt flywheel.**

Part Installation Procedure - Alternator Wiring



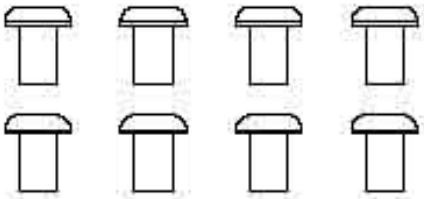
Alternator Wiring
The alternator is wired as shown in the above photo. Make sure contacts are clean and secure.



Alternator Wiring Diagram
Pro Stepper

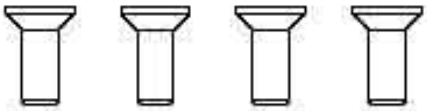
Part Assemblies - Hardware Kit

711-3182 Kit, Hardware 5100 Stepper



1

SCREW 1/4-28X3/8 (HANDRAILS)



2

SCREW M6X16 (NECK JOINT)

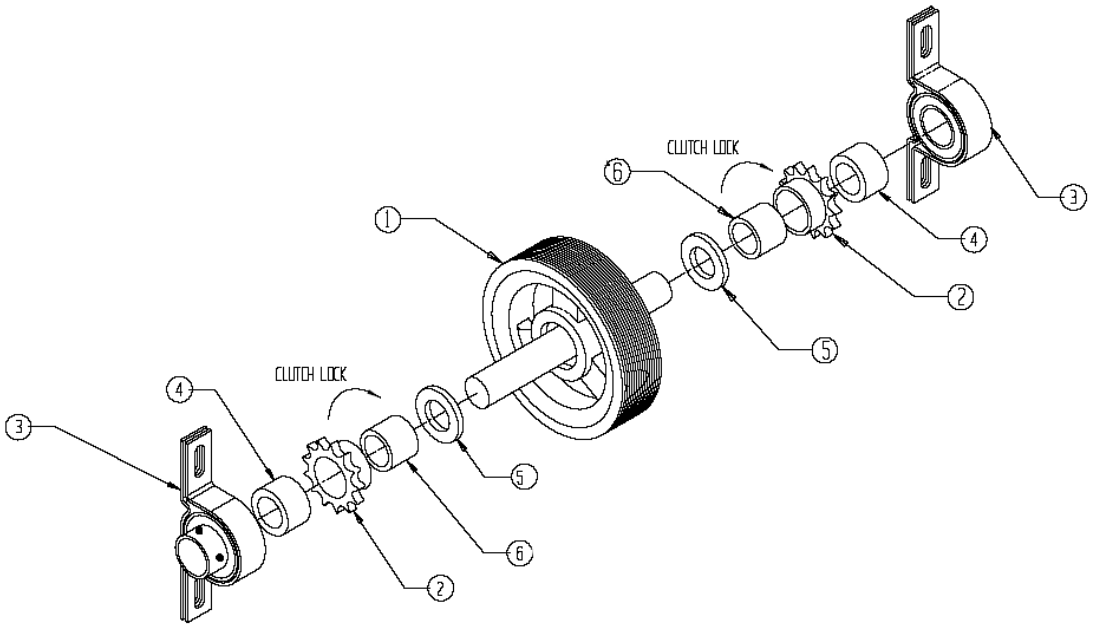
3

5/32" HEX L-KEY

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	110-0506	SCREW,1/4-28x3/8,BHC,HK,SS,BO	8
2	110-3172	SCREW, ISO10642, M6x16	4
3	290-0040	HEX L-KEY, 5/32 "	1

Part Assemblies - Clutch Assembly

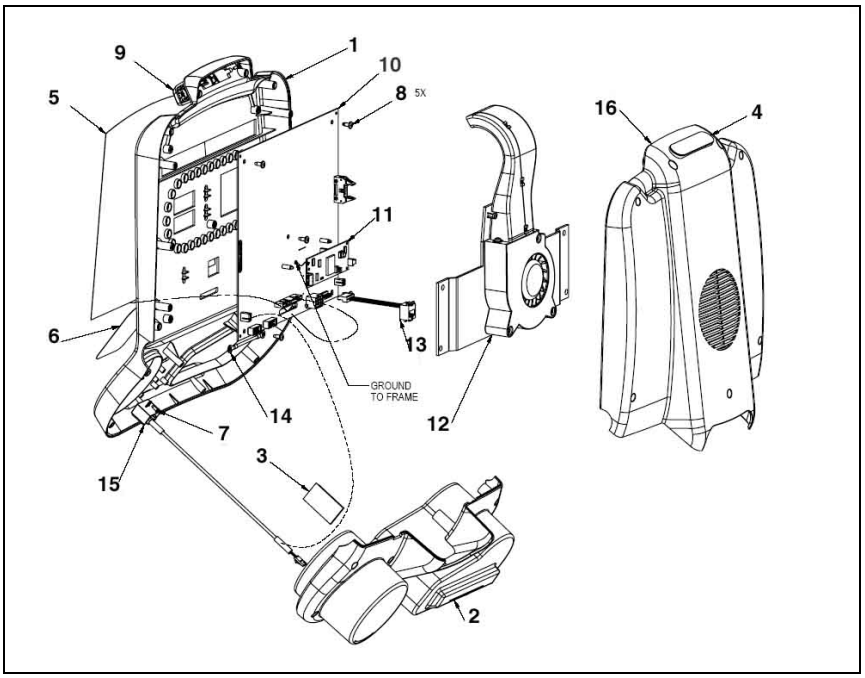
Kit Part Number 800-3114
Drive Shaft Assembly



ITEM	P/N	DESCRIPTION	QTY
1	711-0105	PULLEY, MAIN DRIVE WELDED	1
2	130-1537	SPROCKET 13 TEETH	2
3	130-0401	PILLOW BLOCK 1"	2
4	020-0019	SPACER, MAIN DRIVE .91" LG	2
5	020-0018	SPACER, MAIN DRIVE .20" THK	2
6	020-1760	CLUTCH, ROLLER 1"	2

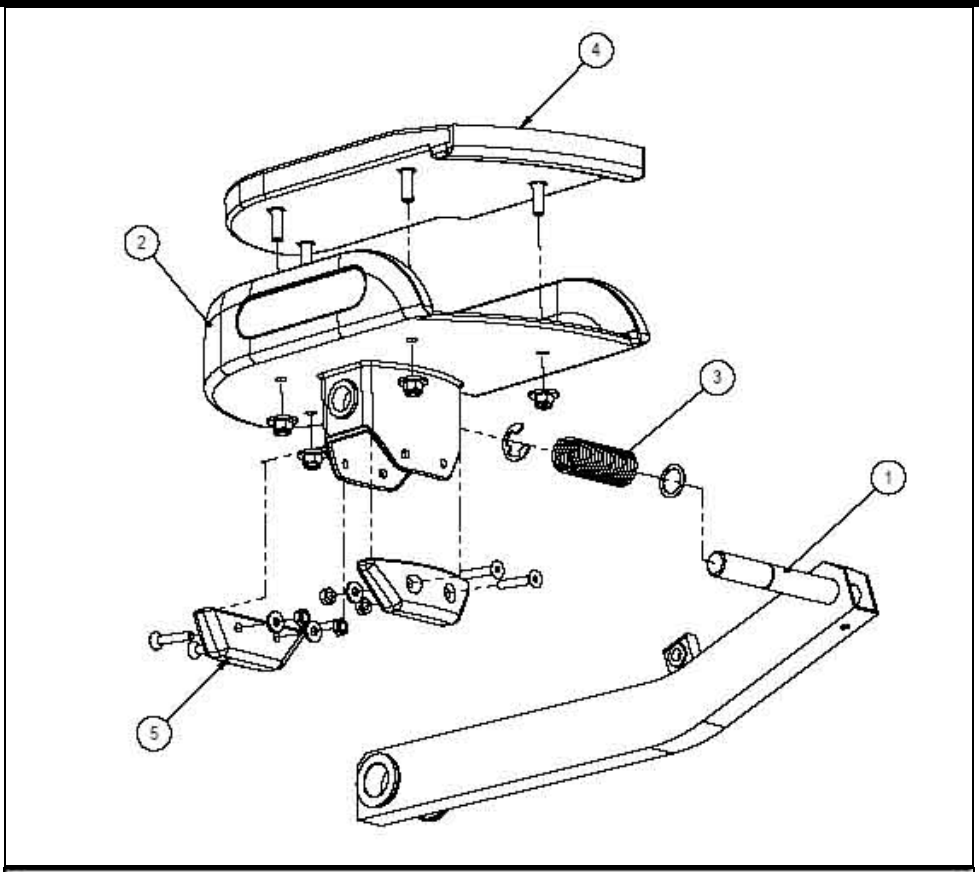
Part Assemblies - Display Assembly

Drawing # 711-3151



ITEM	PART NO	DESCRIPTION	QTY
1	020-6411	DISPLAY, BACK,PRO BIKE	1
2	020-6413	DISPLAY, FRONT, UB/RB PRO	1
3	020-6416	DISPLAY, BOTTOM, PRO BIKE	1
4	020-6460	WINDOW, IR READER, UB/RB	1
5	050-1887	LABEL, LOGO STAR TRAC, PRO BIKE	1
6	050-1926	KEYPAD, PRO STEPPER, ENGL	1
7	050-1958	LABEL, FAMOUS STEPS INFO	1
8	110-3163	SCREW, M3x0.5x8L,PHT,PH,CS,ZI	1
9	110-3252	SCREW, M4x0.7x10L,PHT,PH,CS,BO	5
10	715-3518	ASSY, CABLE, POLAR RECEIVER, PRO/S TR	1
11	718-1107	ASSY, AIR VENT, UB/RB PRO	1
12	718-1108	ASSY., DISPLAY BOARD POPULATED, 5100/6100/6200/6300/6400	1
13	718-1129	PCB, HR CONTACT,UB/RB PRO	1
14	720-5068	ASSY, FAN W/BRACKET, PRO BIKE	1
15	721-0033	ASSY., CONN., FITLINNX/CARDIO	1
16	721-1065	ASSY., HARNESS, GROUND, EL6200	1

Part Assemblies - Left Pedal Assembly

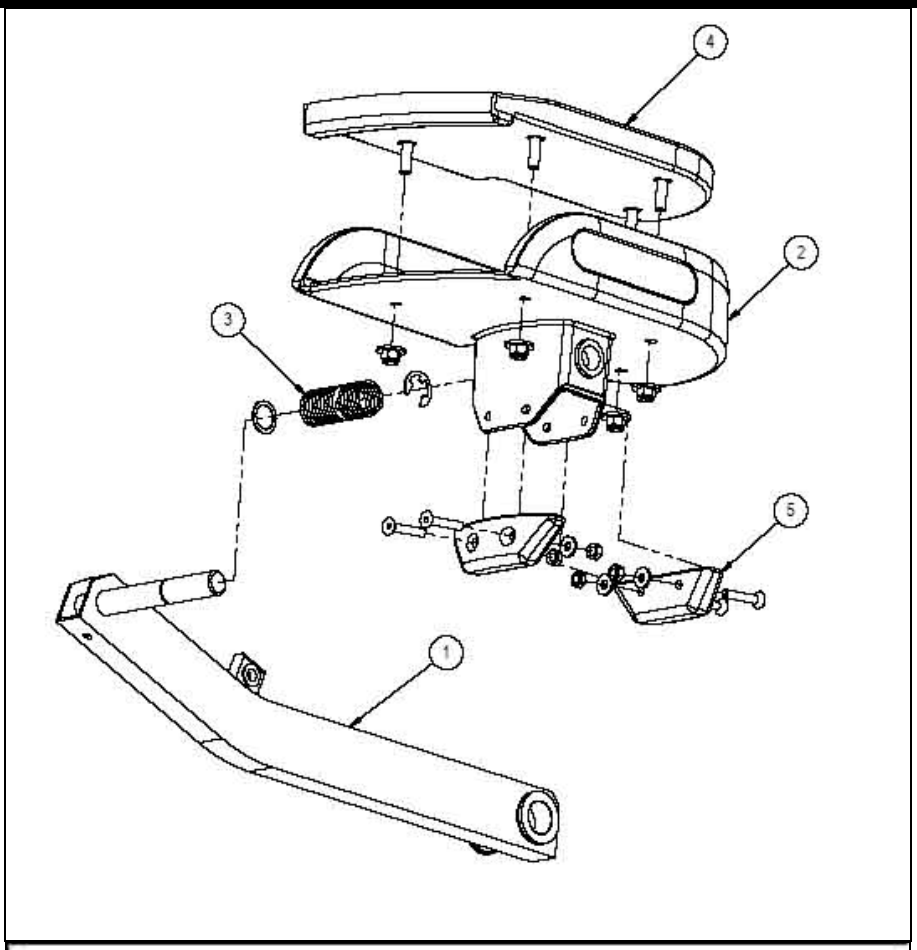


Drawing

711-1045-01 Pedal assy Left

ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	711-3173-01	ASSY, PEDAL ARM, W/BUSHING, LEFT	1
2	711-3174-01	ASSY, PEDAL, W/BUSHING, LEFT	1
3	771-3175	KIT, SPRING FOOT PIVOT	1
4	711-3176-01	KIT,PEDAL PAD,LEFT	1
5	711-3177	KIT, PEDAL STOPS, 5100 STEPPER	1

Part Assemblies - Right Pedal Assembly

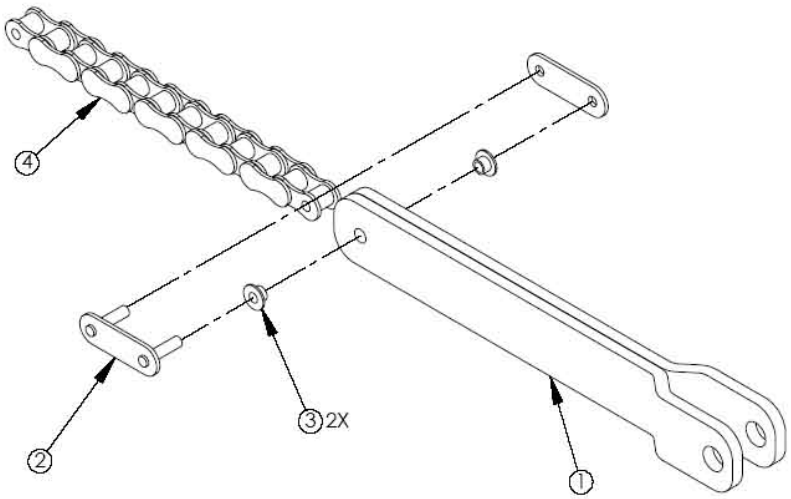


Drawing

711-1045-02 Pedal assy Right

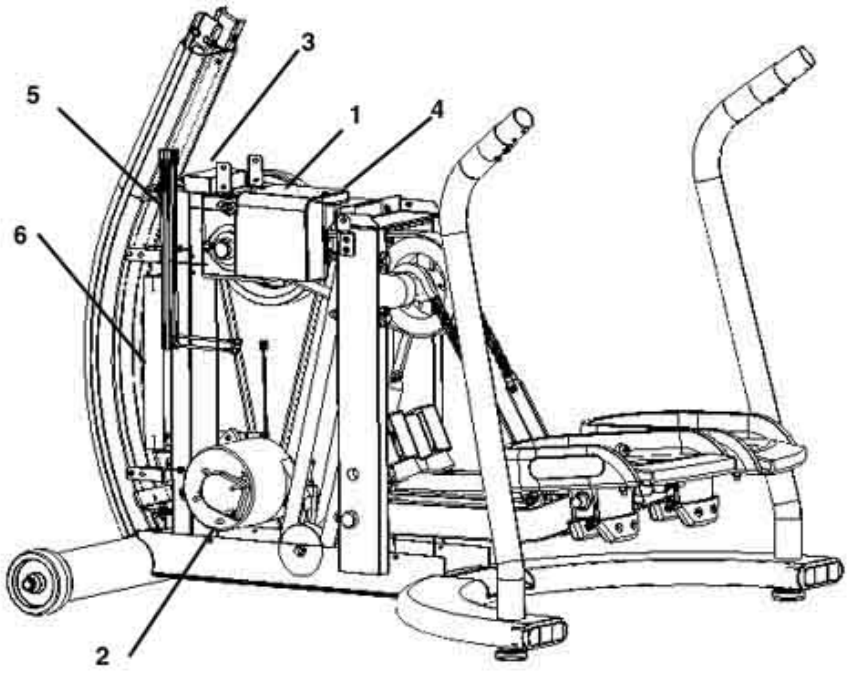
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	711-3173-02	ASSY, PEDAL ARM, W/BUSHING, RIGHT	1
2	711-3174-02	ASSY, PEDAL, W/BUSHING, RIGHT	1
3	711-3175	KIT, SPRING FOOT PIVOT	1
4	711-3176-02	KIT, PEDAL PAD, RIGHT	1
5	711-3177	KIT, PEDAL STOPS, 5100 STEPPER	1

Part Assemblies - Chain Link Assembly



ITEM	PART NO.	DESCRIPTION	QTY
1	020-6810	WELDMENT, CONN,CHAIN,STEPPER	1
2	130-1543	LINK, CONN, CHAIN	2
3	130-1636	BEARING, IGLIDE, 4MMx4MM	2
4	130-1641	CHAIN, 40 NPX, .5 PIT, 14.5 L	1

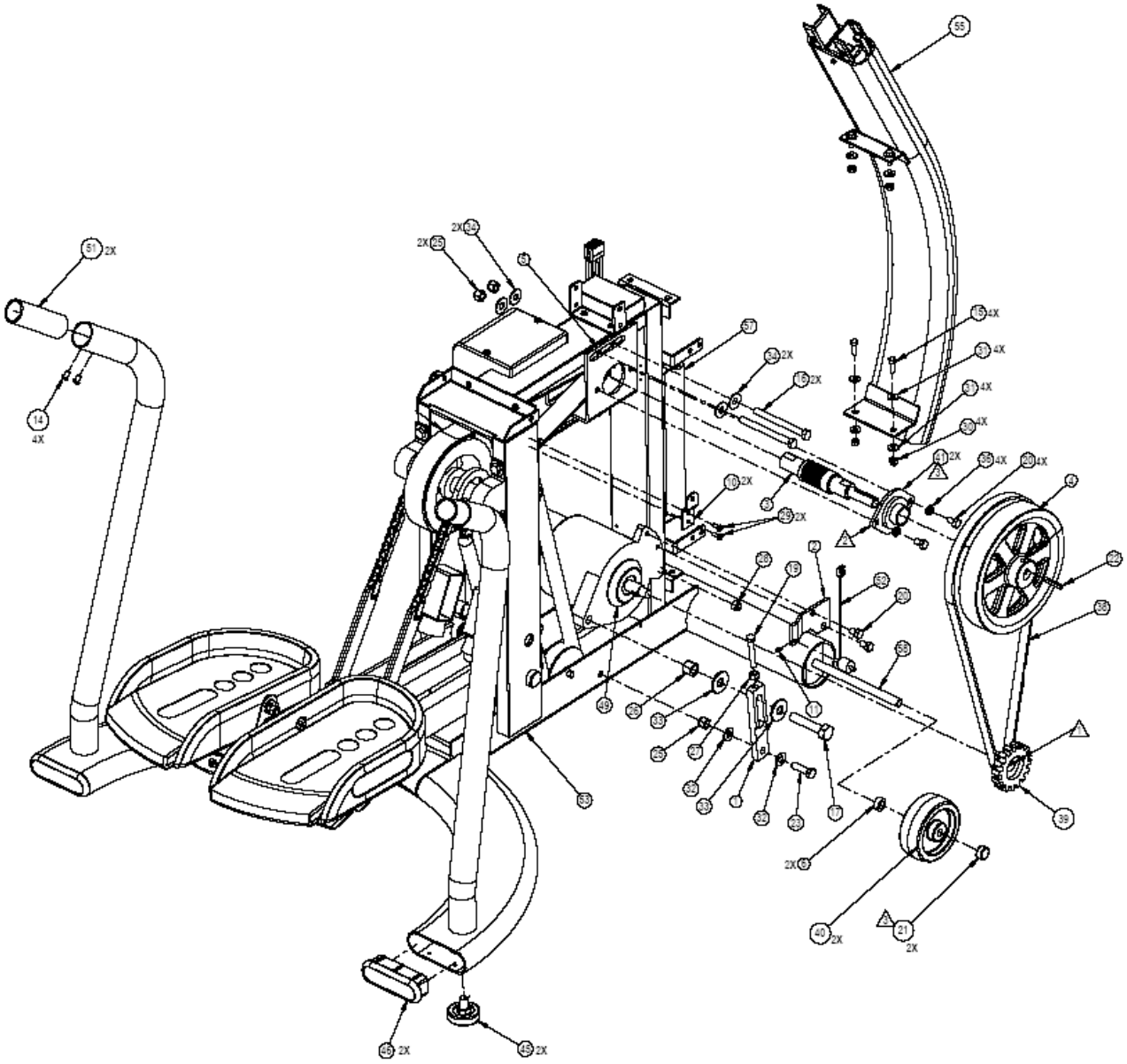
Part Assemblies - Electrical Components



Electrical Components

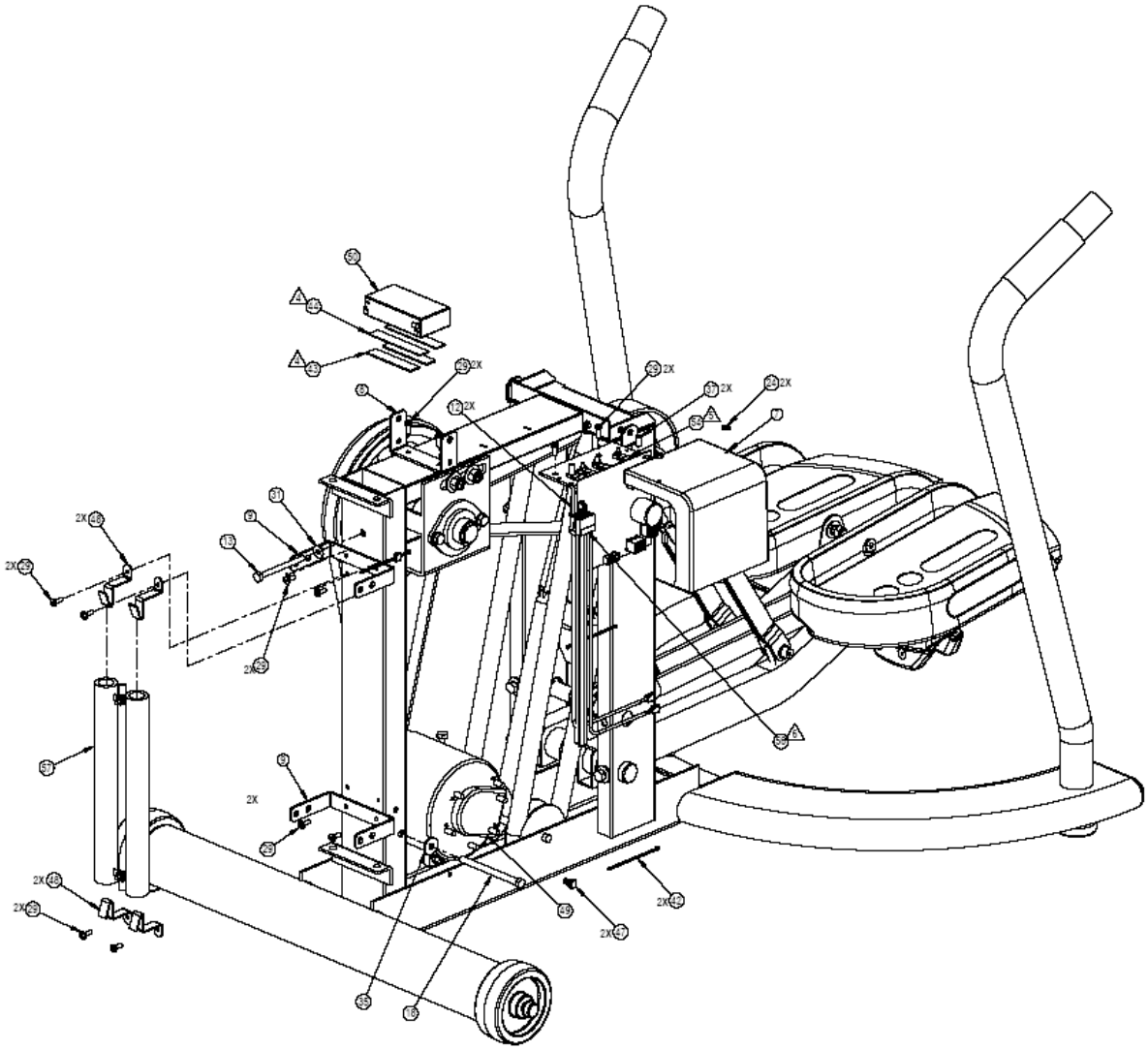
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	020-6748	Shroud, Left, Stepper	1
2	800-3122	Alt, Mando, Raw Alt no Pulley	1
3	800-3102	Battery, 6v, Ub/Rb/Sc	1
4	711-3162	Assy, Lcb, Stepper	1
5	711-3166	Cable, Alt And Lcb, Stepper	1
6	711-3167	Cable, Resistor, Stepper	1

Part Assemblies - Frame Assembly Right



See page 32 for parts list

Part Assemblies - Frame Assembly Left

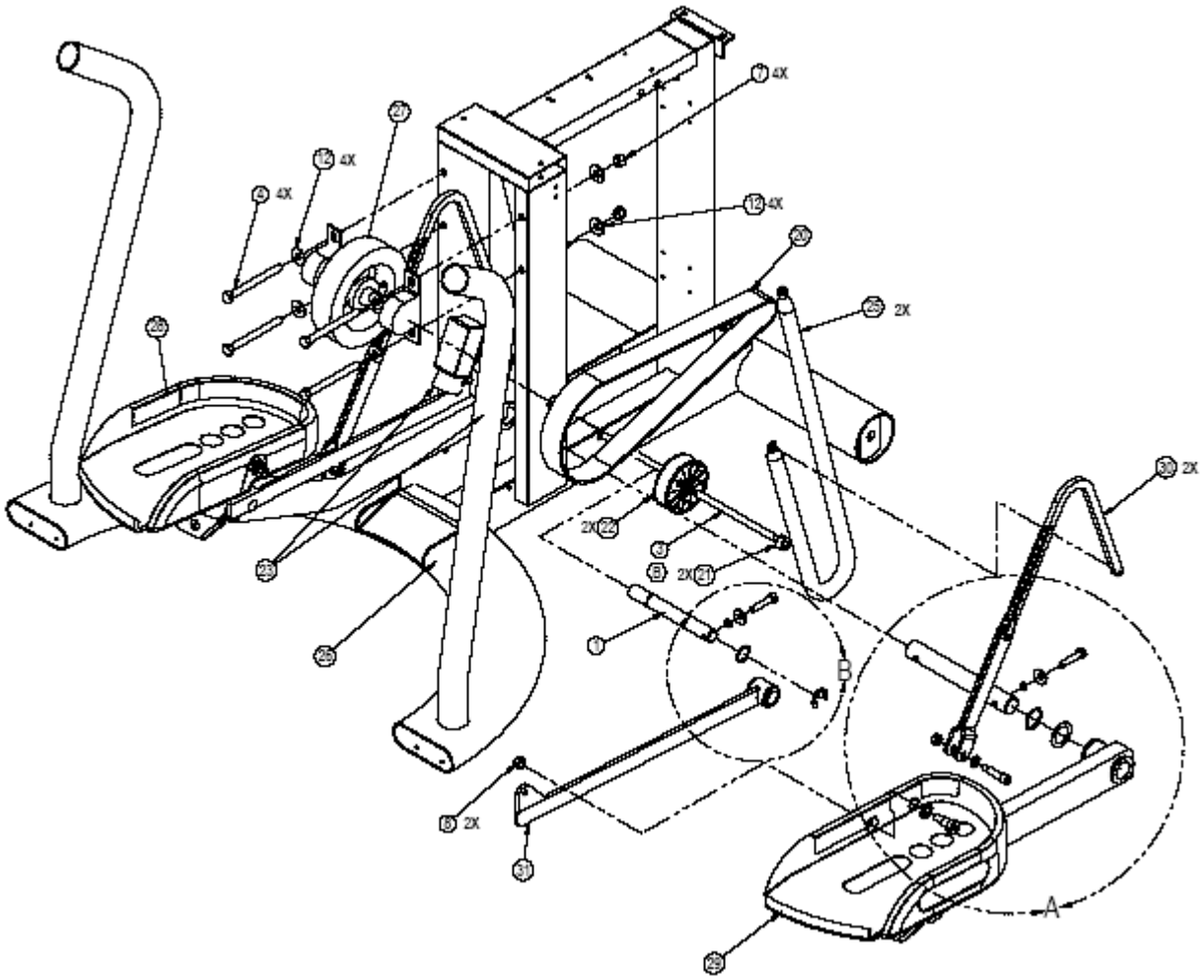


See page 32 for parts list

Part Assemblies - Frame Assembly Parts list

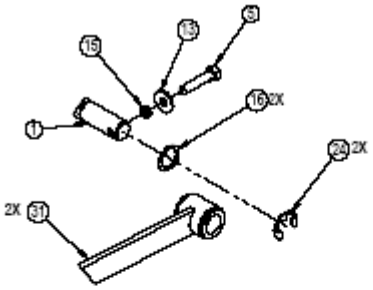
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	020-0021	BRACKET, ALTERNATOR ADJUST	1
2	020-0023	BRACKET, RPM SENSOR/ALTERNATOR	1
3	020-0141	SHAFT/PULLEY, 16J130 STP	1
4	020-0681	FLYWHEEL, 8.0" OD X .625" ID	1
5	020-0690	BRACKET ADJUSTABLE	1
6	020-4604	SPACER, 1/2 ID X 3/4 OD X .31L	2
7	020-6748	COVER, LCB GUARD, STEPPER	1
8	020-6831	BRACKET, SHROUD MOUNT, STEP	1
9	020-6858	BRACKET, SHROUD,STEP-2	2
10	020-6859	BRACKET, SHROUD, STEP-3	2
11	110-0132	SCREW, #6-32x1/4,SHC,HK,AS,NP	1
12	110-0280	SCREW, #6-32x7/8,PHM,SL,CS,ZI	2
13	110-0501	SCREW, 1/4-20x3.25,HHC,CS,ZP	1
14	110-0506	SCREW, 1/4-28X3/8 BHSS SS BLKOX	4
15	110-0570	SCREW, 1/4-20x3/4,HHC,HE,CS,ZP	4
16	110-0601	SCREW, 3/8-16x4.0,SHC,HE,CS,ZP	2
17	110-0610	BOLT, 1/2-13x2.5,HHC,HE,CS,ZI	1
18	110-0652	BOLT, 5/16-18x4.0,HHC,HE,CS,ZP	1
19	110-0686	BOLT, 5/16-18 X 2.0" HHCS FULLTHRD	1
20	110-0687	SCREW, 5/16-18x1/2,HHC,HE,CS,Z	6
21	110-1415	CAP, 1/2 PUSH ON	2
22	110-1442	KEY,MACHINE 3/16X3/16X1.5"	1
23	110-1530	SCREW, 3/8-16x1.25,HHC,HE,CS,Z	1
24	110-1740	NUT, 6-32, KEP	2
25	110-1830	NUT, 3/8-16, NYLOK HEX	3
26	110-1833	NUT, 1/2-13, NYLOK HEX	1
27	110-1870	NUT, 5/16-18 KEPS	1
28	110-1871	NUT, 5/16-18, NYLOC	1
29	110-3026	SCREW, 10-24X.50" PPHTCS	16
30	110-3098	NUT, 1/4-20, HEX, NYLOC	4
31	120-0410	WASHER, 1/4, SAE FLAT	9
32	120-0460	WASHER, 3/8, SAE FLAT	2
33	120-0462	WASHER,1/2"FLAT 9/16ID 1-3/8OD	2
34	120-0463	WASHER, 3/8 X 1 OD	4
35	120-0480	WASHER, 5/16 ID, 7/8 OD, .087 THK	1
36	120-0495	WASHER, 5/16, SPLIT LOCK	4
37	120-0800	SPACER, #6, 1/4"ODx1/2" L, NY	2
38	130-0123	BELT, R450J7 POLY VEE	1
39	130-1302	DRIVE PULLEY,7J130 STEPPER	1
40	130-1694	WHEEL, 4.0" OD X 0.5" BORE	2
41	130-7008	FLANGE BEARING ASSY, 1"	2
42	140-0210	TIE STRAP, 3.5"	2
43	140-0490	TAPE, VELCRO HOOKS	.5 FT
44	140-0492	TAPE, VELCRO LOOPS	.5 FT
45	140-3247	LEVELER, FEET ADJUSTMENT	2
46	140-3310	END CAP, STEP, BASE	2
47	140-3325	TIE MT, 2-WAY EXT, .18" TIE	2
48	170-0688	BRACKET, RESISTOR	4
49	260-0182	ALTERNATOR, MONDO	1
50	580-0275	BATTERY, 6V NP	1
51	710-0521	INSERT, SIDERAIL, UNIVERSAL	2
52	711-0225	RPM SENSOR COIL ASSY,STEPPER	1
53	711-3155	KIT, STEP, FRAME	1
54	711-3162	ASSY, LCB, STEPPER	1
55	711-3163	ASSY, BASE NECK, STEPPER	1
56	711-3166	CABLE, ALT AND LCB, STEP, 5100	1
57	711-3167	CABLE, RESISTOR, STEPPER	1
58	715-3430	AXLE, ELEVATION, PRO TR	1

Part Assemblies - Frame Assembly

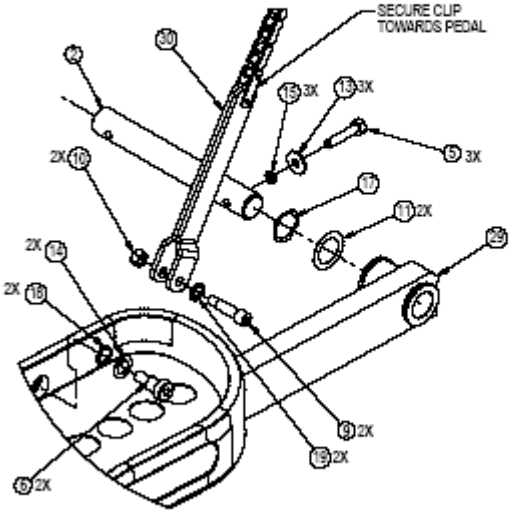


See page 35 for parts list

Part Assemblies - Frame Assembly



DETAIL B



DETAIL A

See page 35 for parts list

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	020-2116	SHAFT, DIA .75",PARALLEL ARM	1
2	020-2120	SHAFT, MAIN LEG, STEP 1 X 7.75	1
3	020-6889	SHAFT, 0.375" X 6.0" LONG	1
4	110-0601	SCREW, 3/8-16x4.0,SHC,HE,CS,ZP	4
5	110-0603	SCREW, 5/16-18x1.5,SHC,HE,CS,Z	3
6	110-0711	BOLT, SHOULDER, 1/2 X 1/2 L	2
7	110-1830	NUT, 3/8-16, NYLOK HEX	4
8	110-3059	NUT, 3/8-16 CENTERLOCK	2
9	110-3088	BLT,SHOUL,3/8 ODX1.0L,SS	2
10	110-3089	NUT,5/16-18,KEP,BLK	2
11	120-0411	WASHER,FLAT,1.0 ID x .02 THK.	2
12	120-0463	WASHER, 3/8 X 1 OD	8
13	120-0480	WASHER, 5/16 ID, 7/8 OD, .087 THK	3
14	120-0493	STEEL SHIM, 1/2 IS X 3/4 OD X .031 THK	2
15	120-0496	WASHER, LOCK 5/16 MIN OD	3
16	120-0505	WASHER, WAVE 3/4" ID	1
17	120-0510	WASHER, WAVE 1"ID	1
18	120-3011	WASHER, WAVE,.58ODx.73IDx.009	2
19	120-3013	WASHER, 3/8 LOCK,INTERNAL,BLK.	2
20	130-0122	BELT, POLY VEE 370J16 37" LG	1
21	130-0321	COLLAR, 3/8 ID W/SET SCREW	2
22	130-1738	PULLEY, IDLER, SPRING, SC5100	2
23	140-0358	CONICAL BUMPER 5/16-18X1"	2
24	140-0940	E-CLIPS, 3/4" ID	2
25	140-3332	SPRING, .11 WIRE X 22.6L, 2.35LB/IN.	2
26	710-1063	FRAME, PAINTED,STEPPER	1
27	711-0110	DRIVE SHAFT SUB ASSY	1
28	711-1045-01	PEDAL ARM, LEFT, STEPPER	1
29	711-1045-02	PEDAL ARM, RIGHT, STEPPER	1
30	711-3170	ASSY, CHAIN LINK, STEPPER	2
31	711-3181	ASSY, PARALLEL, ARM, STEPPER	2

Maintenance Log

Model_____ **Serial Number**_____ **Mfg Date**_____

Date	Cleaning	Problem/Adjustment	Part Replaced	Service performed by

Comments:

800-503-1221

http://support.startrac.com/